

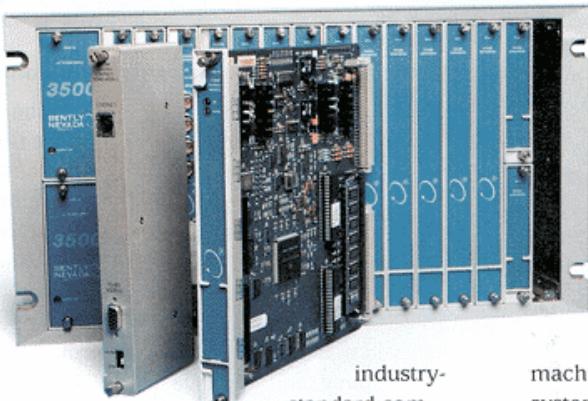


Providing integrated solutions with the new 3500/92 Communication Gateway

by Craig Kugler
Application Engineer
Bently Nevada Corporation

How are you managing the machinery assets in your plant? To make optimal business decisions, operators, maintenance and plant management personnel must have access to machinery information, including vibration and other machine condition information. This means that plant subsystems cannot operate as information islands; rather, they should easily exchange information. Historically, this information exchange has been an expensive and difficult process, which involved dedicated communication links or even point-to-point wiring for each parameter.

Addressing this challenge is Bently Nevada's new 3500/92 Communication Gateway module for our 3500 Monitoring System. By taking advantage of your plant's existing network infrastructure, the new Communication Gateway is the primary communication path from our 3500 Series Monitoring System to your various plant systems. It simplifies the installation and integration process by using an industry-standard network interface,



industry-standard communication protocols, and powerful configuration utilities. Overall, the 3500/92 provides access to important machine information for decision-making, while reducing the total cost to install an integrated machinery monitoring system.

Asset management

Machinery assets affect plant availability. As facilities upgrade their control systems to optimize the plant process, they need to include machine condition information. By correlating process and machinery information, operators, maintenance personnel, and management can see a more complete picture of plant operation. This lets them reduce unscheduled downtime, minimize lost production, and optimize maintenance scheduling for machinery assets. The 3500/92 Communication Gateway allows you to better manage your

plant assets by simplifying integration of machine condition information into important plant subsystems.

Networking solutions

Incorporating machine information into your plant's subsystems can be an expensive process. Whether integrating machine information into a control system or utilizing 3500 software, the 3500/92 simplifies this process. It provides the 3500 system with an Ethernet network interface and TCP/IP protocols, industry standards for network communication between systems.

Originally, the 3500 Monitoring System required two communications interfaces when connecting to both plant systems and 3500 software. The original Communication Gateway (3500/90) used a serial interface (RS232, RS422, or RS485) to connect to plant systems through an expensive Modbus® gateway (supplied by the control system manufacturer). In addition, the 3500 rack required a separate, dedicated connection, the 3500/20 Rack Interface Module, to communicate with the BNC host computer and software. The 3500 Monitoring System, therefore, required two separate interface modules with dedicated serial cables and an external

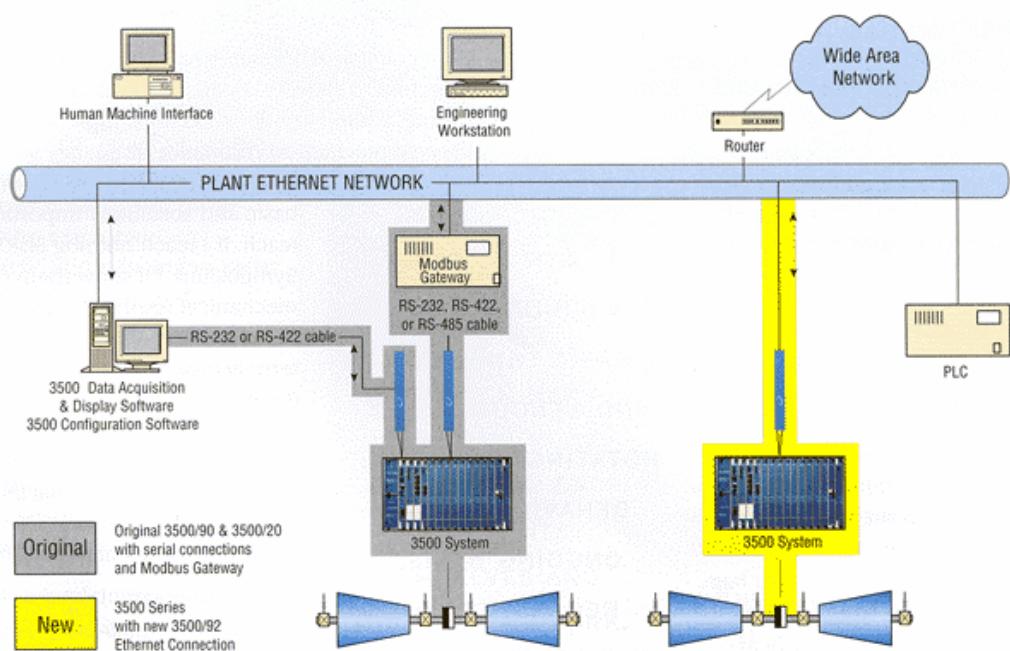


Figure 1. 3500/92 versus 3500/90 system connectivity

gateway to link it to the plant network (Figure 1).

The new 3500/92 Communication Gateway expands the scope of the original 3500/90 by using the Ethernet TCP/IP interface. This interface now provides a single communication path to both 3500 software and 3rd party systems, reducing the amount of hardware required to interconnect with other systems (Figure 1). The 3500 System can communicate directly from the 3500/92's Ethernet interface to the 3500 Data Acquisition, Display and Configuration Software modules. The Ethernet interface also allows you to take advantage of Modicon's relatively new Modbus/TCP protocol to communicate with your Distributed Control System (DCS), Programmable Logic Controller (PLC), Human Machine Interface (HMI), etc. The 3500/92 can provide data directly to your plant systems that support this "Modbus-over-Ethernet" protocol,

eliminating the need for expensive gateways.

Integration utilities

In addition, the new 3500/92 includes powerful new utilities that dramatically reduce the time spent configuring Modbus communication parameters. The new Configurable Modbus Register Utility and the Modbus Configuration File streamline the configuration process for third party systems that connect to the 3500 System. These utilities support IEEE standards, which further simplify the integration process.

Is the new gateway compatible with the 3500/90?

We designed the 3500/92 to directly replace the 3500/90 Communication Gateway. However, the 3500 System will continue to support the 3500/90 and the 3500/20 Rack Interface Module interfaces. Customers with a

3500/90 can also use the new Communication Gateway without any conflict.

Conclusion

At Bently Nevada, we are continually improving our products' capabilities to interface with your plant control and information systems. The new 3500/92 Communication Gateway enhances access to machine condition information, reduces setup time, lowers installation cost, and makes the 3500 Monitoring System the machinery monitoring system of choice for global applications. For additional information, contact your nearest Bently Nevada sales and service representative. ☙